

The Effect of Low Impact Aerobic Exercise on Weight Loss in the Healthy and Successful Gym Club in Ulak Patian Village

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ABSTRACT

This study was motivated by the problem of obesity in mothers at the healthy and successful gymnastics club in Ulak Patian village. This study aims to determine the effect of low impact aerobic exercise on weight loss in participants of the Healthy and Successful Gymnastics Club in Ulak Patian Village. This study is a quantitative study with a quasi-experimental design of one group pretest-posttest design followed by looking at the effect of variable X on variable Y. The population in this study were members of the healthy and successful gymnastics club with a research sample of 15 people using the total sampling technique. This study was conducted at the healthy and successful gymnastics club studio in Ulak Patian village who participated in the gymnastics program for six weeks, three times a week. Weight data was measured before and after treatment with a standard weighing device. Thus, low impact aerobics can be an effective alternative for individuals who want to lose weight safely and enjoyably. In this study, the data analysis used was the normality test analysis, with the lilliefors method, homogeneity and hypothesis testing using the t-test. From the results of the analysis of the Hypothesis testing of the Measurements carried out on the pre-test with the post-test with the same test pre-test average 64.2 to 63.07 post-test statistical calculations were carried out according to the formula used (t-test) obtained tcount 12.4449 > ttable 1.761 which means Ho is rejected and Ha is accepted which means low impact aerobics has a significant effect on losing weight at the healthy and successful gymnastics club in Ulak Patian village. The conclusion in this study is as follows Low Impact Aerobic Gymnastics Exercises in Significantly Influence Weight Loss at the Healthy and Successful Gymnastics Club.

Keywords: Aerobic; gymnastics low impact; weight loss

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Article History:

Submitted: July, 2025
Accepted: August, 2025
Published: August, 2025

Authors' contribution:

- A) Conception and design of the study;
- B) Acquisition of data;
- C) Analysis and interpretation of data;
- D) Manuscript preparation;
- E) Obtaining funding.

Cite this article:

Resdianto, Putra, D., & Rahatul. (2025). The Effect of Low Impact Aerobic Exercise on Weight Loss in the Healthy and Successful Gym Club in Ulak Patian Village. *Indonesian Journal of Sport Management*, Vol. 5(3), 704-710.
<https://doi.org/10.31949/ijsm.v5i3.15397>

INTRODUCTION

Weight loss is a primary goal for many individuals seeking a healthier and fitter body. One common way to achieve this goal is through regular exercise. However, not all types of exercise are suitable for everyone, especially those with joint problems, physical issues, or those just starting an exercise program.

Low-impact aerobics has emerged as an alternative exercise that can provide health benefits without excessive stress on the body. Low-impact aerobics is known for its gentler movements, reduced risk of injury, and can be performed by almost anyone, including the elderly or those who are overweight. However, doubts remain about the extent to which low-impact aerobics can significantly impact weight loss. It is important to research and understand the effects of low-impact aerobics on weight loss, as well as how this exercise intensity can contribute to calorie burning and increase metabolism. With this research, it



is hoped that the public will better understand the effectiveness of low-impact aerobics as a safe and reliable exercise option for weight loss.

Based on the author's observations, during extracurricular volleyball activities on the field, many students still lack basic technical skills, or are not yet as expected. This is evident when serving, underhand passing, and overhand passing. When observed during serving, movement coordination does not run as it should, the ball goes wide to the left or right of the court, and the ball even does not cross the net. When performing underhand passing, most students cannot control the ball well.

Of the factors above, one factor that influences basic volleyball techniques is the training method used. There are many methods used to improve students' basic volleyball techniques. One of them is the Cooperative Method. Many methods are capable of improving basic volleyball technical skills, but it is still not certain which method is most appropriate to be used to improve students' basic volleyball technical skills, especially for extracurricular students at SMP Negeri 02 Rambah Samo. In addition, does motor coordination also affect students' basic volleyball technical skills?

THEORETICAL FRAMEWORK

Aerobic exercise is a movement performed to improve fitness and promote health. Any physical activity that uses most of the body's muscles will stimulate the heart and lungs, including aerobic exercise. Aerobic exercise is one of the programs exercise best for the body, Lots from the community that like and do gymnastics Aerobics are practiced in various aerobics clubs, including those practiced by the community. Many people who participate in aerobics come from various backgrounds. Those who are busy with work often take time to exercise on their days off (Supriady, 2021).

Aerobic exercise is a combination of energetic and creative movements with a fast rhythm, in accordance with the function of aerobic exercise itself. The benefits of aerobic exercise are improving heart health and body stamina, but if done incorrectly can cause injury. This aerobic exercise movement is actually very suitable for young people, 30 years and under, because this exercise has a fast rhythm and contains a variety of movements" (Darsi, 2018).

Aerobic gymnastics was first introduced to the world in 1960 by Dr. Kenneth Cooper in the United States. However, in the 1970s, aerobic dance movements and movements underwent changes. This was due to the emergence of dances and movements that were more popular in society. These dances are said to be popular and are often performed in recreation centers, fitness centers, and schools. Over time, aerobic gymnastics has experienced rapid development. Previously, aerobics was mostly done in groups and centered in studios or fitness centers. Now, aerobics can be done easily by individuals. This means it can be done at home by imitating aerobic exercises found on aerobic compact discs (CDs). Furthermore, almost every agency or office now organizes aerobic gymnastics as a routine exercise. Furthermore, in this era, it is becoming easier to see aerobics as a dance form. The movements are now well-structured and accompanied by music. Therefore, it is known that aerobic exercise helps improve one's appearance (physically), so society accepts and even relies on aerobic exercise as a cheap and enjoyable sport (Trisnawati, Adi, 2010).

Activity next is by include team exercise in frame The First Asian-African Conference and in Ganefo Asia, where to prepare These Indonesian athletes were called by gymnastics coaches from the PRC. At that time, Indonesian gymnasts have made progress in achieving gymnastics achievements. However, It is a shame that the hopes that were starting to

grow had to stop temporarily. because of the political climate, namely when the G 30 S/PKI erupted, so that the trainers- coach from the PRC must be returned to his country.

METHOD

This type of quantitative research uses an experimental research method. This research is a quasi-experimental study using a one-group posttest design, meaning that the experiment is conducted on only one group. This study uses one group and does not include a comparison group. The experimental method can be defined as a research method used to determine the effect of certain treatments on others under controlled conditions (Sugiyono, 2010:72).

Before the aerobic exercise treatment is carried out, a preliminary test (pretest) is carried out and at the end a final test (osttest) is given to determine the effect of low impact aerobic exercise. on weight loss at the healthy and successful gymnastics club in Ulak Patian village.

This research was conducted at the Healthy and Successful Gymnastics Studio in Ulak Patian Village after the research proposal seminar . The research began on April 14 and ended on May 19, 2025.

A sample is a part of the number and characteristics of the population (Sugiyono, 2018: 81). If the population is large and It is impossible for researchers to study everything in a population. For example, due to limited funds, manpower, and time, researchers can use samples taken from that population. The sample in this study was 15 participants in the Healthy and Successful Gymnastics program. The technique used in this study was total sampling, where the entire population is sampled. This is often done when the population is small, less than 30 people, or when the research aims to make generalizations with very small errors. Another term for a saturated sample is a census, where all members of the population are sampled.

RESULTS AND DISCUSSION

After the research data was obtained, it was then described based on the data obtained in the field. This study aimed to determine the effect of low-impact aerobic exercise on weight loss at the Healthy and Successful Gymnastics Club in Ulak Patian Village.

Table 1. Sample Characteristics Based on Body Weight

No	Pretest	Posttest	Decrease Results
1	55 kg	53 kg	2 kg
2	77 kg	76 kg	1 kg
3	52 kg	51 kg	1 kg
4	57 kg	56 kg	1 kg
5	92 kg	91 kg	1 kg
6	66 kg	65 kg	1 kg
7	61 kg	60 kg	1 kg
8	69 kg	68 kg	1 kg
9	75 kg	74 kg	1 kg
10	68 kg	67 kg	1 kg
11	50 kg	48 kg	2 kg
12	69 kg	68 kg	1 kg
13	58 kg	57 kg	1 kg
14	63 kg	62 kg	1 kg
15	51 kg	50 kg	1 kg

Based on Table 1, the frequency of pre-test and post-test weight, with a weight of 55 kg to 53 kg as many as 1 person (6.7%) with a loss of 2 kg, with a pretest weight of 77 kg to 71 kg as many as 1 person (6.7%) with a loss of 1 kg, with a pretest weight of 52 kg to 51 kg as many as 1 person (6.7%) with a loss of 1 kg, with a pretest weight of 57 kg to 56 kg as many as 1 person (6.7%) with a loss of 1 kg, with a pretest weight of 92 kg to 90 kg as many as 1 person (6.7%) with a loss of 1 kg, with a pretest weight of 66 kg to 65 kg as many as 1 person (6.7%) with a loss of 1 kg, with a pretest weight of 61 kg to 60 kg as many as 1 person (6.7%) with a loss of 1 kg, with a pretest weight of 69 kg to 68 kg as many as 1 people (6.7%) with a result of a decrease of 1 kg, with a pretest weight of 75 kg to 74 kg as many as 1 person (6.7%) with a result of a decrease of 1 kg, with a pretest weight of 67 kg to 67 kg as many as 1 person (6.7%) with a result of a decrease of 1 kg, with a pretest weight of 50 kg to 48 kg as many as 1 person (6.7%) with a result of a decrease of 1 kg, with a pretest weight of 69 kg to 68 kg as many as 1 person (6.7%) with a result of a decrease of 1 kg, with a pretest weight of 58 kg to 57 kg as many as 1 person (6.7%) with a result of a decrease of 1 kg, with a pretest weight of 63 kg to 62 kg as many as 1 person (6.7%) with a result of a decrease of 1 kg, with a pretest weight of 51 kg to 51 kg as many as 1 person (6.7%) with a result of a decrease of 1 kg.

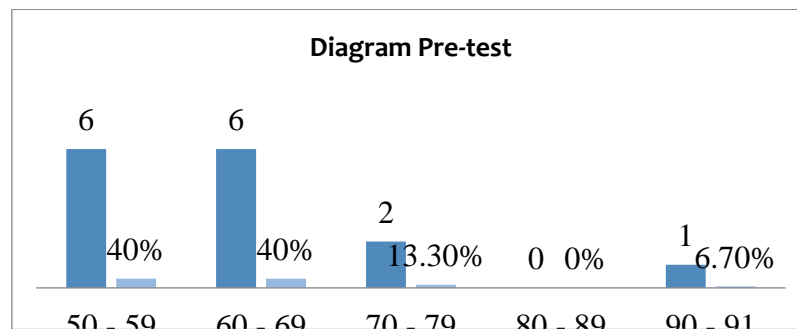


Figure 1. Histogram of Pre-Test Data on Weight Loss Results at the Healthy and Successful Gymnastics Club

Based on the frequency distribution data of the pre-test weight data in the table above from 15 samples, it turns out that 6 samples (40%) have weight results in the range of 50 - 59, then as many as 6 samples (40%) have weight results with a range of 60 - 69, then as many as 2 samples (13.3%) have weight results with a range of 70 - 79, then as many as 0 samples (0%) have weight results with a range of 80 - 89, then as many as 1 sample (6.6%) have weight results with a range of 82 - 89.

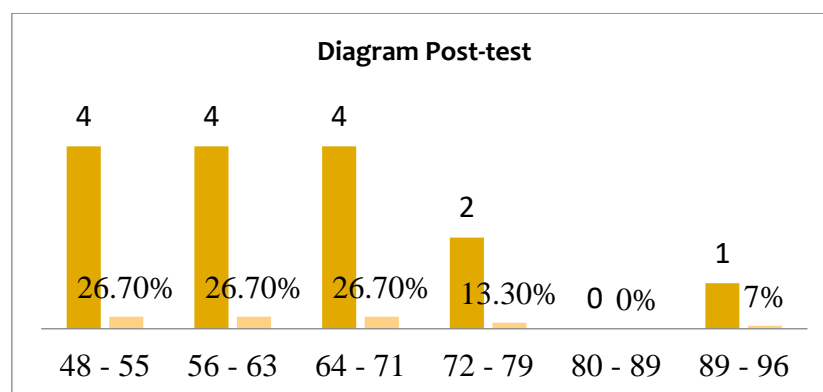


Figure 2. Histogram of Post-Test Data on Weight Loss Results at the Healthy and Successful Gymnastics Club

Based on the frequency distribution data of post-test weight data in the table above from 15 samples, it turns out that 4 samples (26.7%) have weight results in the range of 48 - 55, then as many as 4 samples (26.7%) have weight results with a range of 56 - 63, then as many as 4 samples (26.7%) have weight results with a range of 72 - 79, then as many as 2 samples (13.3%) have weight results with a range of 80 - 89, then as many as 0 samples (0%) have weight results with a range of 89 - 89, then as many as 1 sample (6.7%) have weight results with a range of 89 - 96.

Hypothesis testing was conducted to determine the effect of aerobic exercise on weight loss. The statistical test used was the arithmetic mean difference test (t-test) at a significance level of $\alpha = 0.05$.

Tabel 2. Hipotesis TEst

Agylity T Test	Mean	SD	T _{count}	A	t _{talel}	Information
Pre-test	64.2	11.4280	12.4449	0.05	1.761	Signifikan
Post-test	63.07	11.5787				

Source: Data Processing Results personal data

Based on table 2, the summary of the results of the analysis of the Hypothesis testing of the Measurements carried out on the pre-test and post-test with the same test, namely weighing the body weight, which was carried out statistical calculations according to the formula used (t-test) obtained tcount 12.4449 > ttable 1.761 which means Ho is rejected and Ha is accepted. Thus, the effect of aerobic exercise on weight loss of the healthy and successful gymnastics club.

Discussion

Gymnastics is one of the most popular sports among children, teenagers, and the elderly. Gymnastics is defined as a systematic form of physical exercise involving selected and planned movements to achieve specific goals (Aliriad, 2024). Aerobic exercise is beneficial for our health, but it is especially beneficial for both young and old, as many varied and refined movements have been created. Regular aerobic exercise can prevent obesity, build muscle, and promote better health.

This study aims to determine the "Effect of Low-Impact Aerobic Exercise on Weight Loss at the Healthy and Successful Gymnastics Club in Ulak Patian Village." The sample in this study was 15 participants of the Healthy and Successful Gymnastics Club in Ulak Patian Village, and the total sampling technique used in this study was the total sampling technique. This study used a quantitative experimental method with a one-group pre-test and post-test design. The goal was to determine the effect of low-impact aerobic exercise on weight loss in participants of the Healthy and Successful Gymnastics Club in Ulak Patian Village, which was conducted three times a week for six weeks (Sulaiman et al. 2022).

Results from the study showed that participants aged 27-41 experienced a decrease in self-confidence due to changes in body shape caused by postpartum and irregular eating patterns, leading to an interest in participating in aerobic exercise to improve their body shape and lead a healthier lifestyle. Meanwhile, participants aged 45-49 only participated in aerobic exercise, as muscle mass and physical capacity decrease at this age, making it easier to fatigue during regular exercise. Based on the results of the three-week pre-aerobic exercise treatment, two participants experienced a weight loss of up to 2 kg, while 13 participants experienced a weight loss of only 1 kg. According to the research results

above, a lack of attention to diet often occurs in society, resulting in obesity due to excess fat.

CONCLUSION

Based on the results of research conducted 3x a week for 6 weeks, there is an effect of low impact aerobic exercise on weight loss among participants of the Healthy and Successful Gymnastics Club in Ulak Patian Village. with the results: pre-test average 64.2 to 63.07 post-test statistical calculations were carried out according to the formula used (t-test) and the calculated t was $12.4449 > t\text{-table } 1.761$, which means that H_0 is rejected and H_a is accepted.

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